

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented): A liquid crystal display having liquid crystal sandwiched between a pair of substrates having electrodes for driving the liquid crystal based on respective R, G, and B signals to control transmittance of each of the R, G, and B light components for color display, wherein

each of upper limit values of ranges for driving voltages respectively for R display, G display, and B display applied to the liquid crystal is set independently for R light, G light, and B light, without a control voltage applied to the substrates to control the intensity of R, G, and B light simultaneously,

an upper limit value for a range of values usable within an entire duration of display as driving voltages for respective R, G, and B light components is set independently for each of R, G, and B light components, and

among said independently set upper limit values for respective R, G, and B light components, an upper limit value for at least one of the colors differs from the upper limit values for the other colors.

2. (Cancelled).

3. (Previously Presented): A liquid crystal display according to claim 1, wherein

a liquid crystal control driving signal for R light, a liquid crystal control driving signal for G light, and a liquid crystal control driving signal for B light are separately subjected to gamma correction based on transmittance characteristics of the R, G, and B light components.

4. (Original): A liquid crystal display according to claim 1, wherein the pair of substrates includes a first substrate,

electrodes for driving the liquid crystal formed on the first substrate include a plurality of pixel electrodes arranged in matrix thereon; and

the plurality of pixel electrodes are connected to corresponding poly-Si thin film transistors each using a poly-Si layer formed at a low temperature for an active layer.

5. (Previously Presented): An electrically controlled birefringence type liquid crystal display having liquid crystal sandwiched between a pair of substrates having electrodes for driving the liquid crystal based on a liquid crystal control driving signal for R light, a liquid crystal control driving signal for G light, and a liquid crystal control driving signal for B light to control transmittance of each of the R, G, and B light components for color display, wherein

each of upper limit values of ranges for driving voltages respectively for R display, G display, and B display applied to the liquid crystal is set independently for R light, G light, and B light, without a control voltage applied to the substrates to control the intensity of R, G, and B light simultaneously,

an upper limit value for a range of values usable within an entire duration of the display as driving voltages for respective R, G, and B light components is set independently for each of R, G, and B light components, and

among said independently set upper limit values for respective R, G, and B light components, an upper limit value for at least one of the colors differs from the upper limit values for the other colors.

6. (Cancelled).

7. (Previously Presented): A liquid crystal display according to claim 5, wherein

the liquid crystal control driving signal for R light, the liquid crystal control driving signal for G light, and the liquid crystal control driving signal for B light are separately subjected to gamma correction based on transmittance characteristics of the R, G, and B light components.

8. (Original): A liquid crystal display according to claim 5, wherein the pair of substrates includes a first substrate, electrodes for driving the liquid crystal formed on the first substrate include a plurality of pixel electrodes arranged in matrix thereon; and the plurality of pixel electrodes are connected to corresponding poly-Si thin film transistors each using a poly-Si layer formed at a low temperature for an active layer.

9. (Previously Presented): A liquid crystal display of claim 1, wherein each of said upper limit values of ranges for the driving voltages applied to the liquid crystal is set based on the transmittance characteristic of each of R, G, and B light components.

10. (Previously Presented) A liquid crystal display having liquid crystal sandwiched between a pair of substrates having electrodes for driving the liquid crystal based on respective R, G, and B signals to control transmittance of each of the R, G, and B light components for color display, wherein

each of upper limit values of ranges for driving voltages for application to the liquid crystal is set independently for each of R, G, and B light, without a control voltage applied to the substrates to control the intensity of R, G, and B light simultaneously,

Appl. No. 09/196,013
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Reply to Office Action of November 19, 2003

Attorney Docket No. 81784.0202
Customer No. 26021

the maximum difference among the set voltages stays within 20%,
an upper limit value for a range of values usable within an entire duration of the display as driving voltages for respective R, G, and B light components is set independently for each of R, G, and B light components, and
among said independently set upper limit values for respective R, G, and B light components, an upper limit value for at least one of the colors differs from the upper limit values for the other colors.

11. (Previously Presented) A liquid crystal display having liquid crystal sandwiched between a pair of substrates having electrodes for driving the liquid crystal, and which shows non-transmittance to the light when no voltage is applied, for applying driving voltages to the liquid crystal based on each of R, G, and B signals to control transmittance of each of the R, G, and B light components for color display, wherein

each of upper limit values for defining the maximum light transmittance of the liquid crystal, of ranges of driving voltages applied to said liquid crystal, is set independently for each of R, G, and B light, without a control voltage applied to the substrates to control the intensity of R, G, and B light simultaneously,

an upper limit value for a range of values usable within an entire duration of the display as driving voltages for respective R, G, and B light components is set independently for each of R, G, and B light components, and

among said independently set upper limit values for respective R, G, and B light components, an upper limit value for at least one of the colors differs from the upper limit values for the other colors.

12. (Previously Presented): The liquid crystal display of claim 11, wherein the maximum difference among said set upper limits of ranges of driving voltages applied to the liquid crystal for each of R, G, and B light never exceeds 20%.

13. (Previously Presented) A liquid crystal display, wherein liquid crystal is sandwiched between a pair of substrates, individual pixel electrodes are formed for each pixel on one of said substrates,

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R, G, and B driving signals corresponding to each of said pixel electrodes are applied for driving the liquid crystal by the potential difference between said pixel electrodes and opposing electrodes formed on the other substrate, to control the transmittance of each of the R, G, and B light components for color display, and

each of upper limit values of ranges for driving voltages respectively for said R, G, and B driving signals applied to said pixel electrodes is set independently for R, G, and B light; without a control voltage applied to the substrates to control the intensity of R, G, and B light simultaneously,

an upper limit value for a range of values usable within an entire duration of the display as driving voltages for respective R, G, and B light components is set independently for each of R, G, and B light components, and

among said independently set upper limit values for respective R, G, and B light components, an upper limit value for at least one of the colors differs from the upper limit values for the other colors.

14. (Previously Presented): The liquid crystal display of claim 13, wherein the maximum difference among said set upper limits of ranges of driving voltages for each of R, G, and B light never exceeds 20%.

15. (Previously Presented): The liquid crystal display of claim 13, wherein the maximum light transmittance is defined by said upper limit values of ranges of said driving voltages.

16. (Previously Presented): A reflective type liquid crystal display having liquid crystal sandwiched between a pair of substrates, a reflection electrode formed on one of said pair of substrates, for driving the liquid crystal by the potential difference between said reflection electrode and a transparent electrode formed on the other substrate, to reflect the incident light from said transparent electrode side at said reflective electrode and to control the amount of light of each of the R, G, and B light components re-emitted from said transparent electrode for color display, wherein

each of upper limit values of ranges for driving voltages for R display, G display, and B display applied to said liquid crystal by said transparent electrode and said reflection electrode is set independently for R, G, and B light, without a control voltage applied to the substrates to control the intensity of R, G, and B light simultaneously,

an upper limit value for a range of values usable within an entire duration of the display as driving voltages for respective R, G, and B light components is set independently for each of R, G, and B light components, and

among said independently set upper limit values for respective R, G, and B light components, an upper limit value for at least one of the colors differs from the upper limit values for the other colors.

17. (Previously Presented): The reflective type liquid crystal display of claim 16, wherein

said reflection electrode is a pixel electrode formed individually for each pixel, and

each of the upper limit values of ranges for driving voltages of said R, G, and B driving signals applied to respective pixel electrode is set independently for R, G, and B light.

18. (Previously Presented): A liquid crystal display having a liquid crystal display panel configured by sandwiching liquid crystal between a pair of substrates, wherein:

a plurality of pixels are provided within said liquid crystal display panel, each of said plurality of pixels being separately assigned to one of R, G, and B colors;

individual pixel electrodes are formed for each of said plurality of pixels on one of said pair of substrates;

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R, G, and B driving signals corresponding to each of said pixel electrodes are applied for driving the liquid crystal by the potential difference between said pixel electrodes and an opposing common electrode formed on the other substrate, to control the transmittance of each of the R, G, and B light components for colored display;

each of upper limit values of ranges for driving voltages respectively for said R, G, and B driving signals applied to said pixel electrodes is set independently for R, G, and B, light,

an upper limit value for a range of values usable within an entire duration of the display as driving voltages for respective R, G, and B light components is set independently for each of R, G, and B light components, and

among said independently set upper limit values for respective R, G, and B light components, an upper limit value for at least one of the colors differs from the upper limit values for the other colors.

19. (Previously Presented): A liquid crystal display, comprising;

a display section and a display section driving circuit which supplies a driving voltage signal in accordance with a display content, wherein

said display section driving circuit includes a maximum transmittance voltage limiting circuit which limits throughout an entire duration of display, regardless of display content, a maximum transmittance voltage level existing for each of R, G, and B light components that achieves maximum liquid crystal transmittance of said driving voltage signals to a voltage level determined in accordance with a transmittance characteristic of each of R, G, and B light components, and

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said driving voltage signal having its maximum transmittance voltage level limited by said voltage limiting circuit is supplied to a corresponding pixel in said display section.

20. (Previously Presented): A liquid crystal display as defined in claim 19, wherein

said display section driving circuit includes a minimum transmittance voltage limiting circuit which limits, regardless of display content, a minimum transmittance voltage level for achieving minimum liquid crystal transmittance of said driving voltage signal to a predetermined voltage level greater than 0V by absolute value.

21. (Previously Presented): A liquid crystal display as defined in claim 19, wherein

among said driving voltage signals for respective R, G, and B light components, at least said maximum transmittance voltage levels determined and limited for R and B light components differ from one another.

22. (Previously Presented): A liquid crystal display as defined in claim 19, wherein

the liquid crystal is of a normally black type which shows a non-transmittance characteristic in a state of no voltage application.

23. (Previously Presented): A liquid crystal display as defined in claim 22, wherein

among said driving voltage signals for respective R, G, and B light components, said maximum transmittance voltage level for B light is limited to a voltage level smaller than said maximum transmittance voltage level for R light by absolute value.

24. (Previously Presented): A liquid crystal display according to claim 1, wherein among said independently set upper limit values for respective R, G, and B light components, at least the upper limit values for R and B light components differ from one another.

25. (Previously Presented): A liquid crystal display according to claim 5, wherein among said independently set upper limit values for respective R, G, and B light components, at least the upper limit values for R and B light components differ from one another.

26. (Previously Presented): A liquid crystal display according to claim 10, wherein among said independently set upper limit values for respective R, G, and B light components, at least the upper limit values for R and B light components differ from one another.

27. (Previously Presented): A liquid crystal display according to claim 11, wherein among said independently set upper limit values for respective R, G, and B

Appl. No. 09/196,013
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Attorney Docket No. 81784.0202
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light components, at least the upper limit values for R and B light components differ from one another.

28. (Previously Presented): A liquid crystal display according to claim 13, wherein among said independently set upper limit values for respective R, G, and B light components, at least the upper limit values for R and B light components differ from one another.

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mcd 29. (Previously Presented): A liquid crystal display according to claim 16, wherein among said independently set upper limit values for respective R, G, and B light components, at least the upper limit values for R and B light components differ from one another.

30. (Previously Presented): A liquid crystal display according to claim 18, wherein among said independently set upper limit values for respective R, G, and B light components, at least the upper limit values for R and B light components differ from one another.
